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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/611,247	07/07/2000	Jianshe Tang	3899/390001	9312

32588 7590 05/18/2004

APPLIED MATERIALS, INC.  
2881 SCOTT BLVD. M/S 2061  
SANTA CLARA, CA 95050

EXAMINER

ELEY, TIMOTHY V

ART UNIT	PAPER NUMBER
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3724

25

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/611,247

**Applicant(s)**

TANG ET AL.

**Examiner**

Timothy V Eley

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,9-14 and 17 is/are pending in the application.
- 4a) Of the above claim(s) 15 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11,13,14 and 17 is/are allowed.
- 6) ☒ Claim(s) 1-5,9,10 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-5,9,10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Custer et al in view of Hudson et al, as applied in the rejection beginning on page 2 of paper number 23.

***Response to Arguments***

3. Applicant's arguments filed February 19, 2004 have been fully considered but they are not persuasive.

a. Applicant argues that although Hudson may disclose a compressible wafer backing member of a high friction material, the backing member is not a flexible member forming a boundary of a pressurizable chamber; and that there is no motivation to combine the backing member by Hudson with the carrier head of Custer.

i. However, Hudson et al discloses that it is well known to use a high friction material between the wafer and the carrier to inhibit movement between the wafer and the carrier. Clearly, in the environment of the Custer et al apparatus, it is desirable that the compressible wafer backing material, which is a flexible member forming a boundary of a pressurizable chamber, be capable of inhibiting movement between the wafer and the carrier, since movement between the flexible member and the wafer

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can cause excessive wear on the flexible member. Hudson et al simply teaches that movement between the carrier and the wafer may be prevent by using a high friction material therebetween.

b. Applicant argues that the examiner's reasoning that whether of not the outer surface of the membrane is rougher than the inner surface is an improper rejection.

i. However, the examiner does not agree with this reasoning. Clearly from applicant's disclosure, providing a roughen outer surface in order to prevent relative rotation between the wafer and the carrier is the inventive concept. Applicant's broad recitation of the outer surface of the membrane being rougher than the inner surface does not adequately recite the invention, since the outer surface of the membrane could be rougher than the inner surface, and yet still not prevent relative movement between the carrier and the membrane. In other words, applicant could take a conventional membrane and smooth the inside, in order to make the outer surface rougher than the inner surface. Therefore, whether the outer surface is rougher than the inner surface is an obvious matter of choice and structural design to one having ordinary skill in the art. However, taking a conventional membrane and roughening the outer surface in order to make it rougher than the inner surface is an inventive concept.

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*Allowable Subject Matter*

4. Claims 11,13,14, and 17 are allowed.

*Conclusion*

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

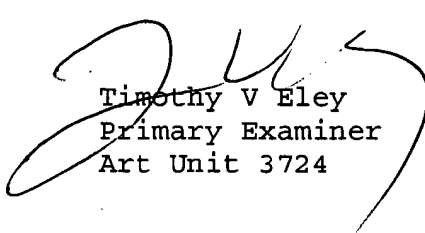
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy V Eley whose telephone number is 703-308-1824. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N Shoap can be reached on 703-308-1082. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Timothy V Eley  
Primary Examiner  
Art Unit 3724

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